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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,883	11/18/1999	JEROME BOMBAL	VL5-062	7906

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EXAMINER

THOMSON, WILLIAM D

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/443,883

Applicant(s)

BOMBAL ET AL.

Examiner

William D. Thomson

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 November 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

1. Claims 1-25 have been presented for examination
2. Claims 1-25 have been examined and rejected.

### ***Information Disclose Statement***

3. The information disclosure statement (IDS) submitted on November 18, 1999 has been considered and initialed by the Examiner.

### **Drawings**

4. This application has been filed with drawings, which have been approved by the draftsman. P.T.O. 948 has been provided.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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6. Claims 1-25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Rajski et al. (909), Pierce et al. (770), and Narayanan (376), individually and further rejected under 35 U.S.C. 102(b) as being clearly anticipated by Scott et al. (497) and Beausang et al. (789).

Taking claim 1, for example Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually at

A method of discriminating between different types of scan failures, comprising:  
simulating a scan enable signal to a circuit represented by a netlist corresponding to a scan chain coupled to combinatorial logic being tested;

simulating initiation of a data capture cycle in the netlist corresponding to the scan chain, the data capture cycle simulating circuit operation to provide simulated output data including a series of scan flops from the scan chain being simulated together with the combinatorial logic; and

scanning data out from each flop in the scan chain and into a test program, the test program: extracting simulated scan flops from the simulated circuit operation data; sorting the simulated scan flops into a logical order; identifying labels for the simulated scan flops; and graphically displaying the simulated scan flops versus time together with the labels.

As to claim 2, the method of claim 1, the test program further graphically displaying the simulated scan enable signal is taught within

As to claim 3, the method of claim 1, the test program further forming expected scan output data from the netlist using an automatic test pattern generator and forming a pseudo-signal graphically displaying miss compares between the displayed simulated scan flops and the expected scan output data is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 4, the method of claim 1, the test program further forming a pseudo-signal graphically displaying miss compares between the simulated displayed scan flops and expected scan output data is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 5, the method of claim 1, wherein extracting the simulated scan flops includes reducing a scope of the simulated output data to one scan chain to be analyzed is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 6, the method of claim 1, wherein extracting the simulated scan flops includes reducing the scope of the output data to one scan chain to be analyzed and wherein sorting the simulated scan flops into a logical order includes sorting the simulated scan flops into a logical order extending from scan input to scan output is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 7, the method of claim 1, the test program further comparing

a selected one of the scan flops to expected scan output data to determine if the selected one of the scan flops agrees with the expected scan output data, and, when the selected one of the scan flops disagrees with the expected scan output data, providing an error message is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 8, the method of claim 8, the test program further, after providing an error message, comparing the scan flops to determine if any adjacent two scan flops are identical, and, when two adjacent scan flops are determined to be identical, providing an indication of a transfer problem associated with the two identical adjacent scan flops, and, when no two adjacent scan flops are identical, providing an indication that a capture problem exists is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

As to claim 10, the method of claim 9, the test program further, after providing an indication that a capture problem exists, providing an indication of which scan flop has the capture problem is taught within Rajski et al. (909), Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

Claims 11-25 are rejected based on the same reasoning as claims 1-10, supra. Claims 10-25 represent article of manufacturing and system equivalent claims that include the same limitations of method claims 1-10 and taught within Rajski et al. (909),

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Pierce et al. (770), Narayanan (376), Scott et al. (497) and Beausang et al. (789) expressly teach, individually.

### **Conclusion**

7. The prior art made of record, see PTO 892, and not relied upon is considered pertinent to Applicant's disclosure, careful consideration should be given prior to Applicant's response to this Office Action.

8. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this action. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Thomson whose telephone number is (703) 305-0022. The examiner can be usually reached between 9:30 a.m. - 4:00 p.m. Monday thru Friday. Voice mail is checked throughout the day. Please leave a detailed message including the serial number.

Facsimile numbers are as follows:

Official: 703-746-7239

Draft: 703-746-7240

After Final: 703-746-7238

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Kevin Teska, can be reached on 704-305-9704.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703-305-3900.

William D. Thomson



Patent Examiner

A.U. 2123

May 3, 2003